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TITLE: METHOD AND INSTRUMENT FOR MEASURING FILM THICKNESS OF COATING FILM OF
GOLF BALL

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ABSTRACT:
PURPOSE: To make it possible to easily and exactly measure the thicknesses of a
clear coating film by irradiating a golf ball formed with the coating film of a
clear coating material compounded with a fluorescent brightening agent with UV
rays and observing the resulted secondary emission rays with a CCD camera and
subjecting the taken-in images to many valued processing to obtain the bright
and dark images of the coating film.

CONSTITUTION: This instrument has a UV ray irradiation device 2 consisting of a
light source 3 for radiating light L including the UV light UV and a UV filter
4 to allow the transmission of the UV light UV in the case the thicknesses of
the coating film at the respective points of the golf ball 1 formed with the
coating film of the clear coating material compounded with the fluorescent
brightening agent on the surface are measured. The ball 1 is irradiated with

the UV light UV and the generated secondary emission rays are detected by the
CCD camera 5. The taken-in images are then binarized by an image processor 6,
by which the bright and dark images are obtd. Namely, the parts where the film
thickness is small are dark and the parts where the thickness is large are
bright and, therefore, the variations in film thicknesses are identified from
the results thereof. For example, the processed images are calculated and are
compared with a previously formed calibration curve, by which the measurement
of the film thicknesses is executed.